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(Section 7 of Purchase Description)

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INCINERATORS7. Rejection7.1 Functioning Tests

Each Incinerator Assembly (Drawing No. 354-100) shall be subjected to separate functioning tests prior to acceptance. Proper functioning of one Incinerator Assembly shall not constitute a basis for over-all acceptance of the entire lot. Functioning tests shall be conducted in two parts: (1) cold air-flow tests, and (2) paper-burning test.

7.1.1 Cold Air-Flow Tests

Each Incinerator Assembly, with Blower (Drawing No. 354-437), shall be connected temporarily to an electrical outlet providing 220-volt, 60-cycle, 3-phase current. The Manometer shall be filled with water (with or without dye) and connected by the Rubber Tubing to the Pressure Tap Fitting attached to the Bottom Assembly Outer Shell (Drawing No. 354-103). The cold air-flow tests shall be made while the Incinerator Assembly is empty, in order (1) to check for leaks at the gasketed joints, and (2) to measure the plenum-chamber pressure, which is an indication of the over-all satisfactory condition of the flow passages such as the louvers in the Top Liner Assembly (Drawing No. 354-104), the Liner Middle Section Assembly (Drawing No. 354-105), and the Liner Bottom Section Assembly (Drawing No. 354-113); the

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Nozzles (Drawing Nos. 354-333, 354-334, and 354-335); and the Flexible Duct (Drawing No. 354-434) and the damper, comprised of the Damper Housing Assembly (Drawing No. 354-209), the Butterfly Assembly (Drawing No. 354-202), the Damper Shaft (Drawing No. 354-314), and a few minor parts.

To check for leaks, the Blower shall be turned on and the damper opened by moving the Handle Assembly (Drawing No. 354-112) to the "Operating" position~~X~~ on the Control Plate (Drawing No. 354-306). The inspector shall then check for air leaks at each of the gasketed joints of the Incinerator Assembly. Initially, the inspector shall check for air leakage by passing his bare hand along each gasketed joint. Leakage thus detected shall be judged excessive if the flame from a lighted "paper book" match is extinguished when held within a 1-inch distance of the source of leakage. Excessive leakage of air at any of the gasketed joints shall be corrected by appropriate measures before the cold air-flow testing is continued.

To measure the plenum-chamber pressure, the Blower shall be turned on and the damper set at the "Operating" position as described above. Under these conditions, the internal air pressure in the lower plenum chamber, as indicated by the Manometer, shall be between 6.0 and 7.0

*The "Operating" position corresponds to the fifth notch. The first notch represents the "Closed" position; the second notch, "1/4 Open"; the third notch, "1/2 Open"; and the fourth notch "3/4 Open".

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inches of water. If the pressure is not within this range, the inspector shall examine all air-flow passages, as described above, to determine the cause. Any errors or defects stemming from the manufacture of the Incinerator Assembly that contribute to internal pressures outside the range of 6.0 to 7.0 inches of water shall be corrected by the manufacturer. The measurement of the plenum-chamber pressure shall then be re-run before proceeding with the paper-burning test.

7.1.2 Paper-Burning Test

The paper-burning test shall consist of burning 500 pounds of selected paper during a period of 2 hours. Prior to the burning test, the Thermocouple shall be inserted into the fitting on the stack; the bead of the Thermocouple shall be located at the center of the stack. The Temperature-Indicating Instrument (Sim-Ply-Trol) shall then be properly connected to the Thermocouple with the Extension Lead Wire.

A supply of reasonably dry paper shall be obtained and used for the burning test. Typical paper from discarded office files, such as Bond and onionskin typing paper, file cards, and file folders (excluding newspapers or telephone books) shall be considered suitable.

At the beginning of the burning test, the Door Assembly (Drawing No. 354-114) shall be opened and 50 pounds of mixed

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papers shall be loaded into the Incinerator Assembly. A few crumpled sheets of paper shall be ignited and scattered over the paper charged; the Door Assembly shall be closed and the Blower turned on. During the first 3 to 5 minutes, the Handle Assembly shall be advanced gradually from the "Closed" to the "Operating" position on the Control Plate while the inspector observes the progress of ignition. When ignition is well established, intermittent feeding of 15-pound batches of paper shall be started. Each of the thirty 15-pound batches shall be fed by (1) quickly moving the Handle Assembly to the "Closed" position; (2) opening the Door Assembly; (3) charging the paper; (4) closing the Door Assembly; and (5) moving the Handle Assembly quickly to the "1/2 Open" position (third notch), and then gradually to the "Operating" position (fifth notch), so as to avoid suddenly reaching excessive stack-gas temperatures above 1800 F. Successive batches shall be fed at intervals of about 3 minutes, or less, depending on the rate of burning; the pile of paper in the incinerator shall not be allowed to decrease below the initial level (corresponding to the first 50 pounds) or to increase above a level approximately 6 inches below the bottom of the loading opening in the Liner Middle Section Assembly.

Near the end of the burning test, the slow burning residue shall be stirred once by manual poking, to obtain more rapid and complete burnout. If observation indicates that

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burning has stopped, any unburned paper or char shall be re-ignited once and the burning continued at low air flow (with the Handle Assembly at the "1/4 Open" or "1/2 Open" position) for final burnout.

7.2 Results of the burning test shall be considered satisfactory by the inspector and each Incinerator Assembly shall be acceptable if the following conditions are achieved:

- (1) Incineration of 500 pounds of paper shall be completed in 2 hours.
- (2) The residual charred paper, excluding the ash which remains at the end of the 2-hour test period, shall not exceed 1-1/2 pounds in weight.
- (3) Any pieces of charred or raw paper carried out in the stack gases shall be no larger than that which would pass freely through the mesh openings of the Basket Assembly (Drawing No. 354-111).
- (4) All movable parts associated with the loading door, that is, with the Door Assembly, Frame Assembly (Drawing No. 354-207), and Latch Assembly (Drawing No. 354-215), and with the damper, that is, with the Damper Housing Assembly, the Butterfly Assembly, and the Damper Shaft, shall function properly, as intended.

If any one of the above conditions is not met during the test, the malfunction which is attributable to improper

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fabrication, assembly, and/or workmanship shall form the basis for rejection. Rejection shall not preclude the manufacturer from correcting the conditions which form the basis of rejection, and from reworking a rejected part to remedy such defects for resubmission to inspection and test. However, all units and parts so reworked shall be so indicated to the inspector.

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AIR-FED INCINERATOR

SPECIFICATIONS

INCINERATOR

Weight: 1000 lbs. total
Chamber: 700 lbs.
Motor & Blower Ass'y: 300 lbs.
Floor Area Required: 7 ft. by 46 in.
Over-all Height: 64 in. (Excl. of stack)

BLOWER

Type: Centrifugal Fan
Capacity: 2400 CFM
Accessories: Manometer
Stack Temp. Gage

MOTOR

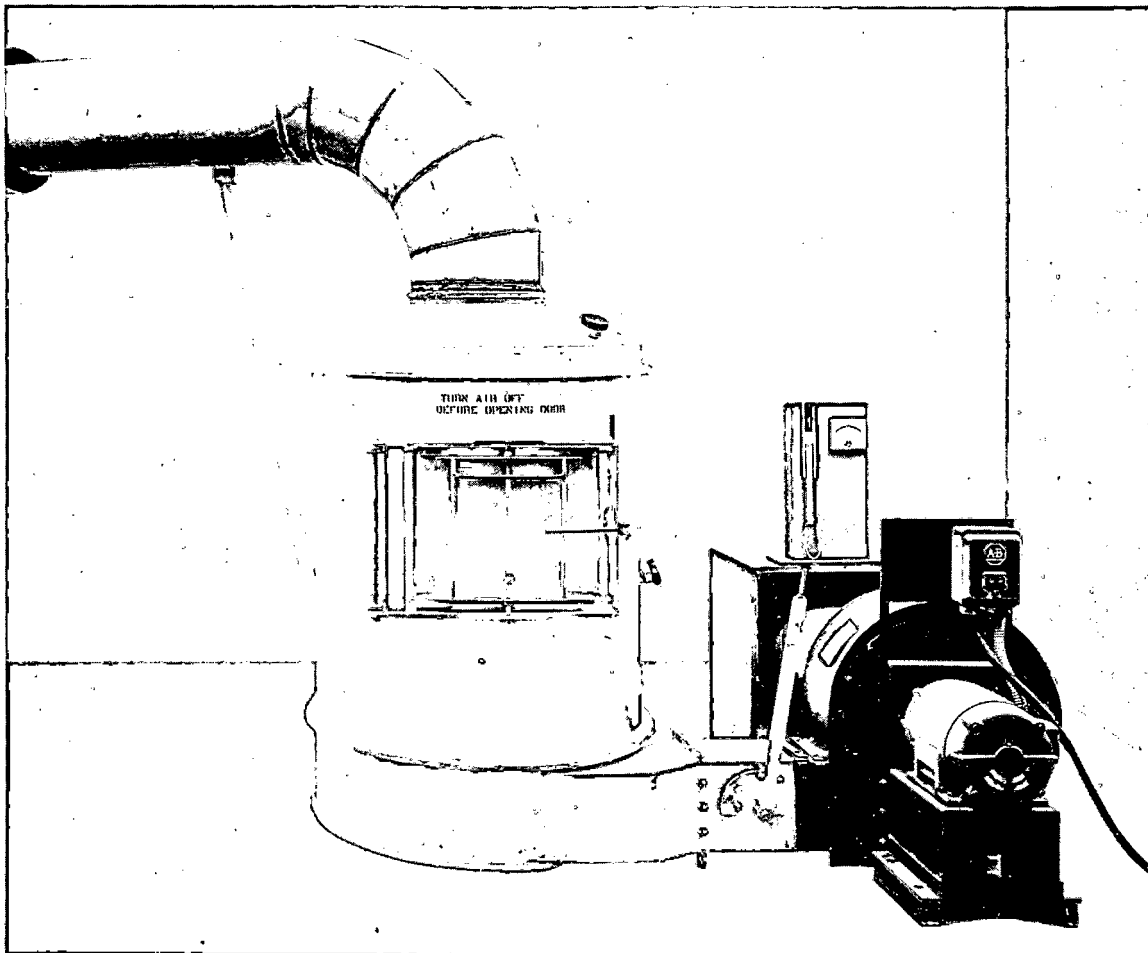
Type: 3450 rpm induction
Voltage Requirements:
220 v. AC, 60 cycle, 3-phase
Horsepower: 7.5

BURNER CAPACITY:

Without Fly Ash or Smoke:
200 lbs. paper/hr.
Ignoring Fly Ash or Smoke:
500 lbs. paper/hr.

COST: \$2800 (Excl. of Installation)

STOCK No.: 4/4540-H00-4404



Incinerator Complete With Motor and Blower Assembly

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DESCRIPTION

The air-fed incinerator (see sketch) is designed to destroy large quantities of classified papers in a short period of time. It is constructed with an inner liner of stainless steel and an outer shell of mild carbon steel with a loading opening cut through to the inner liner in which the paper is burned. The loading door is of breech-type construction and securely seals the opening when closed.

Air for combustion is forced through openings in the inner liner or shell in such a manner that the contents of the fire chamber are constantly agitated. The air supply is provided by an electric-powered blower capable of supplying sufficient air to burn up to 500 pounds of paper per hour. Combustion products are exhausted through a stack fitted with a screen at the top of the fire chamber to reduce the discharge of fly ash.

ADVANTAGES

High Rate of Paper Destruction—At normal air input rates, approximately 200 pounds of paper can be completely burned in an hour; however, the air flow rate can be adjusted to burn up to 500 pounds of paper per hour.

Inside Installation—Because of the manner in which the air enters the incinerator (between the outer and inner shells), temperatures are controlled so that there is no damage to the surroundings and the unit can be installed in almost any room in a building.

Simple Operation—Once installed, no special techniques are required for operation of the incinerator. The fire chamber is loaded; the paper ignited; the door closed; and the blower started. The incinerator may be repeatedly loaded and operated with complete safety.

Undetected Operation—Under normal operating conditions (200 lbs./hr.), paper can be burned with virtually no residue or fly ash being discharged. Burning at greater quantities per hour risks the discharge of smoke and fly ash from the vent stack.

LIMITATIONS

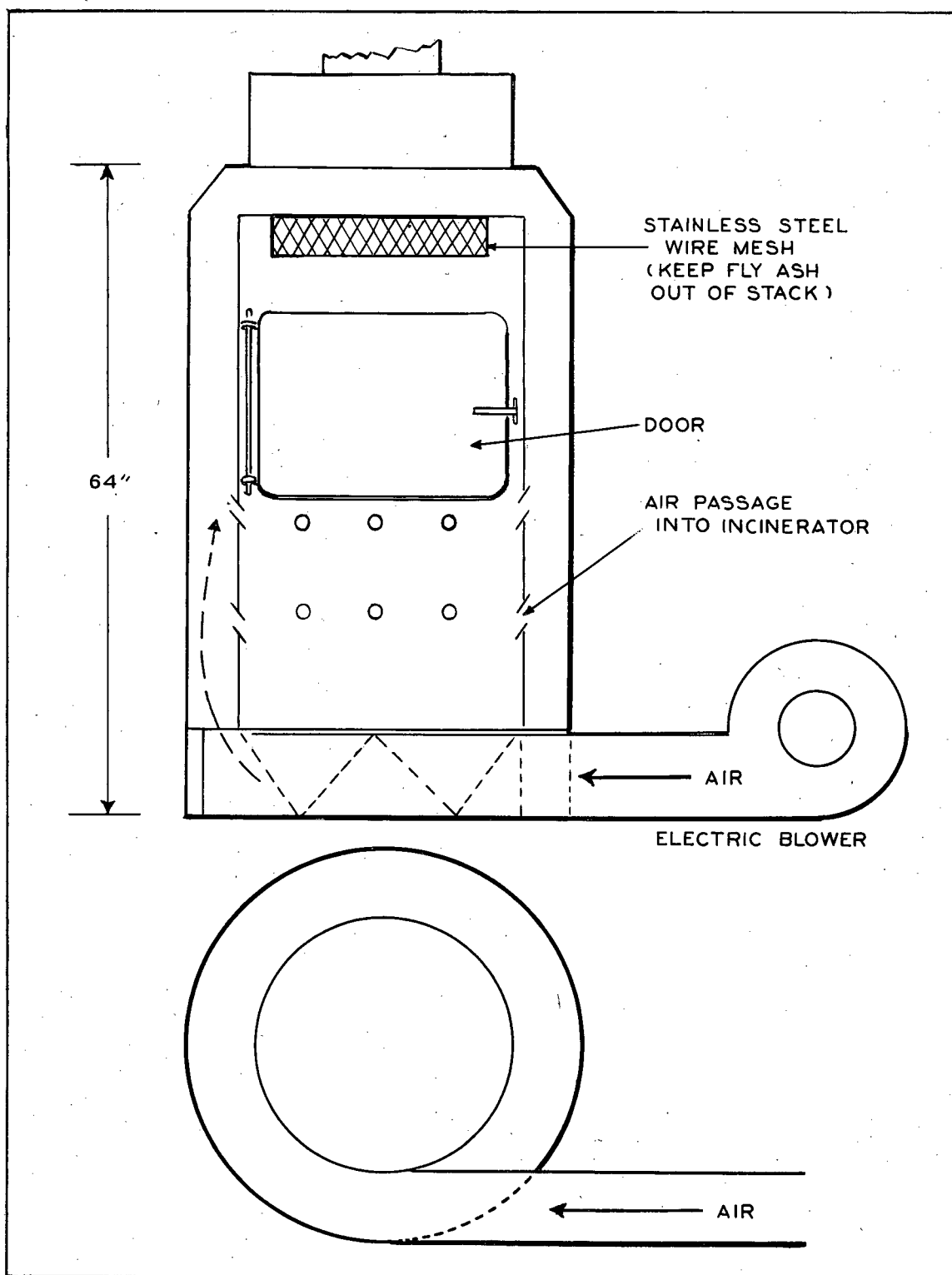
A 220 volt electrical supply is required for operation of the blower motor.

Installation of the incinerator requires trained personnel.

A 200 square inch stack is required to vent the products of combustion to the outside of the building.

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Sketch of Incinerator

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